

REMARKS

In response to the Final Office Action dated 8 September 2008, claims 1-12 are pending. Claims 2 and 10-11 have been amended to correct formalities including superfluous or missing periods and spelling errors. Claim 12 has been amended to clarify the multiple dependency. No new matter has been added by the amendments.

Abstract

The examiner has objected to the specification as lacking an abstract. Applicants point out that the abstract was provided with the international application and is printed on the first page of the published international application (WO 2004/090061), and is found in public PAIR with this application. For convenience, the abstract has been included with this response.

Final Action - Premature

Applicants respectfully request withdrawal of finality from the previous office action on the basis that the examiner has put forth a new grounds of rejection which was not necessitated by amendment or based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). (See MPEP 706.07(a)). In the final office action, Examiner has presented a rejection based upon Brehmer et al. (4,717,496), Goldberg (6,475,619), or British Shoe Machinery Ltd. (WO 94/03211), in view of Gaku et al. (4,820,769), Oien (5,525,663), or Lees et al. (2006/121225) with Reith (4,939,036) as evidence. The Examiner has rejected **all claims** based upon the combined teaching of the references discussed above, but has included teachings by Reith (4,939,036) which were not present in the Non-Final Office action. The references have been applied against all of the claims, most of which were not amended. Most of those which were amended were amended solely to correct informalities, with no change in substance, or (in the case of claim 4) were in response to direction by the Examiner, and would therefore have been predictable (See MPEP 706.07(a)). In the arguments, the Examiner relies upon the teaching of Reith to support the use of filler particles of different sizes, an argument which was not presented in the Non-Final Office Action, and also

shows that the reference is not merely evidentiary, but is in fact relied upon to support the rejection of the claims. Therefore, since all the claims now stand rejected on grounds which were not presented in the Non-Final Office Action the finality of the pending Office Action should be withdrawn.

Applicants further request withdrawal of the Final Office Action based on the lack of clarity in the rejection. In the final office action, the Examiner has presented a rejection based upon Brehmer et al., Goldberg, **or** British Shoe Machinery Ltd., in view of Gaku et al., Oien, **or** Lees et al. with Reith as evidence. It is unclear which references are being applied against which claims. The MPEP 707.07(d) clearly states, "A plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group." In the present case, it is unclear which references are being applied against which claims, and quite clear that all the claims have been improperly grouped together. Given the fact that it is unclear which references have been cited to reject which claims, Applicants have not been given a reasonable opportunity to respond and overcome the rejections presented. For this reason, Applicants request withdrawal of finality of the Office Action, and if rejections are presented, that a Non-Final Action be issued.

REJECTIONS UNDER 35 U.S.C. § 103(a)

In the interest of expediting prosecution, Applicants will attempt to respond to the rejections and arguments. It appears from the prior Non-Final Office Action, and the current Final Office Action that since the first three references (Brehmer et al. (4,717,496), Goldberg (6,475,619), or British Shoe Machinery Ltd. (WO 94/03211)) are listed in the alternative, the Examiner is asserting that any of them would serve as a primary reference in the rejection, and that the last three references (Gaku et al. (4,820,769), Oien (5,525,663), or Lees et al. (2006/121225)) may each be alternatively used to support the rejection of all the claims. The purpose of Reith is not given in the rejection, only in the response to arguments, but the teachings of Reith are required to support the rejection, and it is uncertain against which claims Reith is being applied. For the purpose of responding to the rejection, the first three references will be interpreted as separately useable as

primary references for the rejection, while the last three references (excluding newly added Reith) will be interpreted as being used to support the rejection of the claims in combination with **one** of the primary references. The use of the term "or" in the rejection indicates that more than two references are not required to support the rejection. The Reith reference will be discussed separately.

The invention is a thermoplastic reinforcing material in the form of a hot melt adhesive/filler combination with specific physical properties. The claims require hot melt adhesive(s) with particular MVR values, which produce a mixed hot melt adhesive/filler composition with particular physical properties. The claimed composition is particularly suited for the production of supports in shoe manufacturing. Very important for a shoe stiffening material is the thermoplasticity, in addition to the ease of handling in the activated (heated) state. Materials are required which are elastic but tacky enough to be incorporated into the shoe during the manufacturing process. The compositions of the present invention are particularly suited for this purpose with unexpectedly improved elastic and tack properties. These improved properties are present in compositions having the particular physical properties required by the claims, and these improved properties are not taught or suggested by the references cited. As discussed further below, specific compositions having the improved properties are not disclosed or suggested by the references. Therefore, the claims are allowable in view of the references cited. Applicants therefore respectfully request the rejections be withdrawn.

First, none of the primary references relied upon discloses a hot-melt adhesive composition with an MVR value required by the claims. The examiner acknowledged this fact by withdrawing previous rejection under 35 U.S.C. § 102. Each of the primary references has been further applied under 35 U.S.C. 103, but the Examiner has not shown how the secondary references overcome the deficiency of the primary references. The Examiner has not identified a reason to modify the compositions taught by the references to produce the physical properties required by the present claims, as required by MPEP 706.02(j). The Examiner has not indicated where such modifications are taught, either in the primary references or the secondary references. Given the discussion of the secondary references from the Non-Final Office Action (paragraph 9), it appears that the Examiner

is asserting that the secondary references describe methods for manufacturing articles composed of hot-melt adhesives, but the references do not teach or suggest, and the Office Action does not specifically state how they teach or suggest, the desirable properties of the hot-melt adhesive/filler material of the present invention missing from each of the primary references. Further, the Examiner has asserted that the properties of the hot-melt adhesive/filler material are inherent in the materials themselves. As shown in the specification, this is not correct, since the claimed properties are not based solely on the types of materials, but the ratio of the materials used, among other features. Therefore, a *prima facie* case can not be supported, and the rejections under 35 U.S.C. 103 should be withdrawn. Further reasons with respect to specific references are discussed below.

In support of their position, Applicants produced a comparison with the closest disclosed prior art. Applicants prepared the composition described by Brehmer et al., and show in amended Table 1 (line 15) that the composition described by Brehmer et al. does **not** possess the properties required by the claims and does not have the benefit of the materials of the present invention. The Examiner has asserted that the comparison between Brehmer et al. is not persuasive (apples versus onions) because Brehmer et al. uses PVC as filler, rather than chalk or wood flour. However, Applicant's comparison **is** valid. Firstly, Applicants report in Table 1 compositions comprising poly-caprolactone and PVC that **do** have the advantageous properties of the present invention (see line 8 of Table 1). As illustrated, it's not just the type of materials but the properties of those materials **in combination** that provide the advantageous benefit. Furthermore, the MPEP 716.02(f)(III) clearly states "Although evidence of unexpected results must compare the claimed invention with the closest prior art, applicant is not required to compare the claimed invention with subject matter that does not exist in the prior art. *In re Geiger*, 815 F.2d 686, 689, 2 USPQ2d 1276, 1279 (Fed. Cir. 1987)" and "Requiring applicant to compare claimed invention with polymer suggested by the combination of references relied upon in the rejection of the claimed invention under 35 U.S.C. 103 'would be requiring comparison of the results of the invention with the results of the invention.' 357 F.2d at 422, 148 USPQ at 714." Since the closest subject matter in the references cited is the composition described in Example 1 of Brehmer et al., the showing by Applicant that the prior art composition does not have the properties of the present invention is

sufficient to overcome a *prima facie* argument of obviousness. Neither the primary references, nor the secondary references teach or suggest the advantageous properties associated with the present invention. The Examiner has used improper hindsight reasoning to modify and combine the references in an attempt to require Applicants to compare their invention with their own invention.

The Examiner has further argued that the secondary references show, for instance, "that grinding an adhesive to a specific particle size is obvious," and that "a multitude of particle sizes can be used in hot melt adhesives." Applicants assume that this is in reference to claims 2-4. However, none of the secondary references teach or suggest why one of ordinary skill would use particular particle sizes to produce compositions having the properties of the present invention. The Supreme Court held in *KSR Int'l Co. v. Teleflex Inc.* that an invention "composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." Simply that a particular particle size 'is known' does not make the invention obvious.

For at least these reasons, the rejection of the claims should be withdrawn. In the interest of completeness, each reference will be discussed in detail below. How the references are used or combined is unclear from the rejection, but will be addressed based on Applicants' best understanding.

Brehmer et al.

Concerning rejections based upon Brehmer et al. in view of one of Gaku et al., Oien, or Lees et al., Brehmer et al. describes stiffening materials comprising a binder material with plastic filler particles. Brehmer et al. does not disclose the material volumetric flow rate of the binder material, or the other properties of the hot-melt adhesive/filler mixture required by the present claims. In the Non-Final Office Action, the Examiner asserts that Brehmer et al. teaches polycaprolactone or elastomeric polyurethane (presumably as the binder) and calcium carbonate and wood meal (presumably as filler) and that the claims do not exclude the polymer coated fillers required by Brehmer et al. Applicants wish to state for the record that the calcium carbonate and

wood meal described by Brehmer et al. are plastic coated, and not used separately. (see column 2, lines 54-56)

In view of the new rejection under 35 U.S.C. § 103, Applicants submit that Table 1 of the specification shows that compositions comprising the same type of materials **do not** necessarily have the properties required by the claims. Therefore the claimed properties are **not** inherent in the types of materials used. Rather, it is the combination of materials that produce the properties required by the claims, which defines the composition of the present invention.

The compositions having the required properties are advantageous for several reasons as described in the specification, and these advantages are unexpected in view of Brehmer et al. By way of example, Applicants prepared the composition described by Brehmer et al., as discussed previously.

The secondary references, Gaku et al., Oien, or Lees et al. do not remedy the deficiency of Brehmer et al., being cited only with regards to methods of working adhesive compositions. They add nothing with respect to the composition itself. Therefore the combination of Brehmer et al. and any of the secondary references do not support a *prima facie* case of obviousness.

The new reference Reith (4,939,036) does not overcome the deficiency of Brehmer et al. Reith does not disclose the unexpected advantage associated with the use of particles which produce the properties of the present claims. The simple fact that particles of different sizes "are known," does not make the claimed particle ranges obvious. The reference does not disclose what particle sizes produce the properties of the present invention. Furthermore, the claimed particle ranges give unexpected benefits in terms of adhesiveness and tack, as well as the unexpected benefit of allowing the composition to be used without a support substrate, as well as being recyclable. As disclosed in the specification, it is not the particle sizes per se, but the properties of the combined materials which result in an advantageous product.

Goldberg (6,475,619)

Concerning rejections based on Goldberg in view of one of Gaku et al., Oien, or Lees et al., Goldberg describes fabric based stiffeners having thermal adhesive properties on the top and bottom surfaces. Goldberg describes mixing conventional latex materials with adhesives, and optionally with fillers. (See column 2, lines 56-67). Goldberg further includes dispersants in the composition. Goldberg does not disclose the material volumetric flow rate of the adhesive or latex material, or the other properties of the mixture required by the present claims. In the Non-Final Office Action, the Examiner asserts that Goldberg teach poly-caprolactone (claim 3) particle sizes (claim 4) and calcium carbonate by example. Applicants point out that the particle size disclosed by Goldberg is for the **adhesive polyester resin** (see claim 4 of Goldberg), and not the **filler**. The only particle sizes stated in the present claims refer to the filler and not the polyester resin. The calcium carbonate particles disclosed in the examples by Goldberg are smaller (6.5 μm , see tables example 1-3) than the particles described in the present invention in claims 2-4. The newly added reference Reith appears to have been cited to support the idea that a variety of particle sizes may be used in melt adhesives. However, Reith does not disclose the benefit of using a particular particle size, which, as shown in the present invention can significantly affect the beneficial properties of the composition. The advantage of the present invention is based on the use of particles which produce the properties according to the present claims, as discussed below.

Since the compositions described by Goldberg contain materials significantly different than those described in the present claims, it would not be reasonable to predict that the properties required in the present claims are present in the specific compositions described by Goldberg. The Examiner has given no evidence to show or suggest that the properties required by the present claims are necessarily present in the specific compositions disclosed by Goldberg. Goldberg offers no teaching of the benefits of the present invention, caused by the use of a composition having the properties claimed. The secondary references do not correct this deficiency, since they deal solely with methods of treating hot-melt adhesive materials.

Further evidence of non-obviousness compared with the teachings by Goldberg is that the compositions described by Goldberg require a non-woven fabric substrate. The Examiner has asserted that this difference is immaterial (see paragraph 4 of the Final Action). However, this difference illustrates clearly another of the unexpected benefits of compositions having the properties of the present invention. In addition to the unexpectedly improved adhesive and/or tack properties, the compositions of the present invention also have the unexpected benefit of being independent of a fabric or other support structure. As a result, by-products from cutting and/or shaping the material can be recycled for re-use, while materials bound to a fabric or other substrate must be discarded as waste and cannot be reused. This advantage is neither taught by, nor present in the composition of the references.

Goldberg alone does not disclose how the compositions described might be modified to produce the properties of the compositions of the present invention. Neither does Goldberg teach or suggest the unexpected results produced by the compositions of the present invention. Therefore, Goldberg alone cannot support a *prima facie* case of obviousness.

The secondary references, Gaku et al., Oien, or Lees et al. do not remedy the deficiencies of Goldberg, being cited only with regards to methods of working adhesive compositions. They add nothing with respect to the composition itself. Therefore the combination of Goldberg and any of the secondary references do not support a *prima facie* case of obviousness.

The new reference Reith does not overcome the deficiency of Goldberg. Reith does not disclose the unexpected advantage associated with the use of particles which produce the properties of the present claims. The simple fact that particles of different sizes "are known," does not make the claimed particle ranges obvious. The reference does not disclose what particle sizes produce the properties of the present invention. Furthermore, the claimed particle ranges give unexpected benefits in terms of adhesiveness and tack, as well as the unexpected benefit of allowing the composition to be used without a support substrate, as well as being recyclable. As disclosed in the specification, it is not the particle sizes per se, but the properties of the combined materials which result in an advantageous product.

British Shoe Machinery Ltd. (WO 94/03211)

Concerning rejections based on British Shoe Machinery Ltd. (hereinafter BSM) in view of one of Gaku et al., Oien, or Lees et al., BSM describes splinting/casting material comprising a combination of polyester and a cellulosic filler. BSM does not disclose the material volumetric flow rate of the splinting material, or the other properties of the mixture required by the present claims. In the Non-Final Office Action, the Examiner asserts that BSM teaches the use of polycaprolactone and wood flour. (see paragraph 5 of the Non-Final Office Action) Since the specific compositions described by BSM contain materials significantly different than those described in the present claims, it would not be reasonable to predict that the properties required in the present claims are present in the specific compositions described by BSM.

It is the combined properties of the composition as claimed that determine whether the composition has the advantages of the present invention. The Examiner has given no evidence to show or suggest that the properties required by the present claims are necessarily present in BSM and BSM offers no teaching of the benefits of the present invention, caused by the use of a composition having the properties claimed. The secondary references do not correct this deficiency, since they deal solely with methods of treating hot-melt adhesive materials.

Further evidence of non-obviousness compared with the teachings by BSM is that the compositions described by BSM require a substrate, such as a non-woven fabric or release paper. In addition to the unexpectedly improved adhesive and/or tack properties, the compositions of the present invention also have the unexpected benefit of being independent of a fabric or other support structure. As a result, by-products from cutting and/or shaping the material can be recycled for reuse, while materials bound to a fabric or other substrate must be discarded as waste and cannot be reused. This advantage is neither taught by, nor present in the compositions in the references.

BSM discloses the use of polymers having MW greater than 10,000 or 30,000. The Examiner has asserted that the teaching of polymers having MW of greater than 30,000 encompass 80,000. However, based on the teaching by BSM, one would not predict the unexpected properties

of the present invention based on the use of a poly-caprolactone having a particular molecular weight, or in combination with a particular filler, or a filler having a particular particle size. As shown in Table 1, not all poly-caprolactone polymers produce compositions having the properties required by the present invention or have the unexpected benefits of the present invention. In essence, BSM does not teach or imply the benefit of the present invention caused by the use of a composition having the particular properties of the present claims.

BSM alone does not disclose how the compositions described might be modified to produce the properties of the compositions of the present invention. Neither does BSM teach or suggest the unexpected results produced by the compositions of the present invention. Therefore, BSM alone cannot support a *prima facie* case of obviousness.

The secondary references, Gaku et al., Oien , or Lees et al. do not remedy the deficiencies of BSM, being cited only with regards to methods of working adhesive compositions. They add nothing with respect to the composition itself. Therefore the combination of BSM and any of the secondary references do not support a *prima facie* case of obviousness.

The new reference Reith does not overcome the deficiency of BSM. Reith does not disclose the unexpected advantage associated with the use of particles which produce the properties of the present claims. The simple fact that particles of different sizes "can" be used, doesn't make the claimed particle ranges obvious, since the claimed particle ranges give unexpected benefits in terms of adhesiveness and tack, as well as the unexpected benefit of allowing the composition to be used without a fabric support, and recycled. However, as disclosed in the specification, it is not the particle sizes per se, but the properties of the combined materials which result in an advantageous product.

CONCLUSION

As discussed above, the finality of the office action is premature, since a new ground of rejection has been presented. Furthermore, the Office Action itself is deficient in that it is unclear which references are being applied to which claims, making a full response by the Applicant impossible.

However, given our best understanding of the grounds of the rejection, Applicant has shown that the compositions of the present invention, having the properties required by the claims are not obvious with respect to the references cited, due to the unexpected and improved properties resulting from the use of compositions having the properties required by the present claims. Therefore, Applicants respectfully request the withdrawal of the rejections, and request that the Examiner issue a Notice of Allowance indicating the allowability of claims 1-12. If the Examiner believes for any reason that personal communication will expedite prosecution of this application, the hereby is invited to telephone undersigned counsel at the number provided.

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Respectfully submitted,

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